

CLAIMS

What is claimed is:

1. A method for iterative determination of a distance between a receiving station and a transmitting station, comprising:

receiving information by a calculating unit via a signal, including a code, from the transmitting station to the receiving station, where the code is received by the receiving station an integral number of times during a signal transfer time required for the signal to travel between the transmitting station and the receiving station;

calculating, during a first iteration, the integral number of times the code is received; and using the integral number in at least a second iteration without recalculating.

2. A method according to claim 1, wherein the integral number calculated in the first iteration is used in all iterations.

3. A method according to claim 2, wherein said calculating uses an estimation of a position of the receiving station to calculate the integral number.

4. A method according to claim 3, wherein the receiving station is located in a radio cell of a radio communications system, and

further comprising basing the estimation of the position of the receiving station on a cell identifier of the radio cell, the cell identifier being assigned to the receiving station.

5. A method according to claim 4, wherein a value other than zero is used in the first iteration for the signal transfer time.

6. A device for iterative determination of a distance between a receiving station and a transmitting station, comprising:

an interface receiving information via a signal, including a code, from the transmitting station to the receiving station, where the code is received by the receiving station an integral number of times during a signal transfer time required for the signal to travel between the transmitting station and the receiving station; and

a calculation unit calculating, during a first iteration, the integral number of times the code is received and using the integral number at least in a second iteration without recalculating.

7. A computer software product embodied on at least one computer-readable medium storing instructions to control a processor to perform a method comprising:

receiving information by a calculating unit via a signal, including a code, from the transmitting station to the receiving station, where the code is received by the receiving station an integral number of times during a signal transfer time required for the signal to travel between the transmitting station and the receiving station;

calculating, during a first iteration, the integral number of times the code is received; and using the integral number in at least a second iteration without recalculating.

8. A computer software product according to claim 7, wherein the integral number calculated in the first iteration is used in all iterations.

9. A computer software product according to claim 8, wherein said calculating uses an estimation of a position of the receiving station to calculate the integral number.

10. A computer software product according to claim 9, wherein the receiving station is located in a radio cell of a radio communications system, and

further comprising basing the estimation of the position of the receiving station on a cell identifier of the radio cell, the cell identifier being assigned to the receiving station.

11. A computer software product according to claim 10, wherein a value other than zero is used in the first iteration for the signal transfer time.